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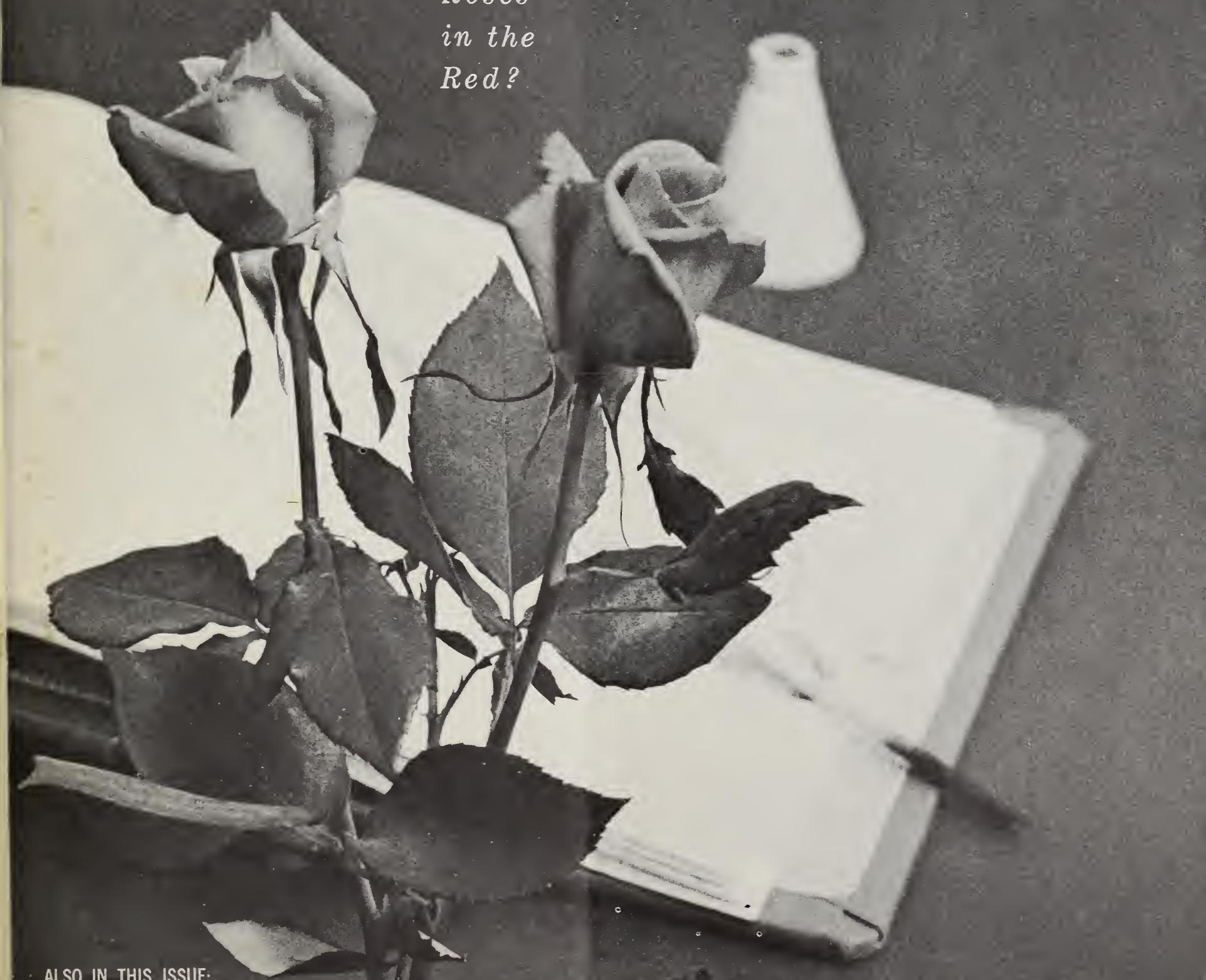
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THE FARM INDEX

ECONOMIC RESEARCH SERVICE • U.S. DEPARTMENT OF AGRICULTURE • JUNE 1965

*Roses
in the
Red?*



ALSO IN THIS ISSUE:

NEW RULES IN THE CATTLE GAME ■ CROSS-COUNTRY CONTEST: TRACTORS VS. BULLDOZERS ■ THE RIVER TWINS ■ STEER TO STEAK



economic trends

ITEM	UNIT OR BASE PERIOD	'57-'59 AVERAGE	1964		1965		
			YEAR	APRIL	FEBRUARY	MARCH	APRIL
Prices:							
Prices received by farmers	1910-14 = 100	242	236	236	238	239	244
Crops	1910-14 = 100	223	237	243	235	237	243
Livestock and products	1910-14 = 100	258	235	230	240	241	244
Prices paid, interest, taxes and wage rates	1910-14 = 100	293	313	314	318	318	320
Family living items	1910-14 = 100	286	300	300	304	303	303
Production items	1910-14 = 100	262	270	272	273	273	276
Parity ratio		83	75	75	75	75	76
Wholesale prices, all commodities	1957-59 = 100	—	100.5	100.3	101.2	101.3	101.7
Commodities other than farm and food	1957-59 = 100	—	101.2	101.1	101.9	102.0	102.1
Farm products	1957-59 = 100	—	94.3	94.4	94.5	95.5	97.6
Food, processed	1957-59 = 100	—	101.0	100.4	102.1	101.8	102.3
Consumer price index, all items	1957-59 = 100	—	108.1	107.8	108.9	109.0	—
Food	1957-59 = 100	—	106.4	105.7	106.6	106.9	—
Farm Food Market Basket: ¹							
Retail cost	Dollars	983	1,015	1,004	1,013	1,015	—
Farm value	Dollars	388	373	361	381	384	—
Farm-retail spread	Dollars	595	642	643	632	631	—
Farmers' share of retail cost	Per cent	39	37	36	38	38	—
Farm Income:							
Volume of farm marketings	1957-59 = 100	—	118	91	89	89	84
Cash receipts from farm marketings	Million dollars	32,247	36,748	2,434	2,359	2,459	2,400
Crops	Million dollars	13,766	16,820	781	864	740	800
Livestock and products	Million dollars	18,481	19,928	1,653	1,495	1,719	1,600
Realized gross income ²	Billion dollars	—	42.0	—	—	42.1	—
Farm production expenses ²	Billion dollars	—	29.4	—	—	29.7	—
Realized net income ²	Billion dollars	—	12.6	—	—	12.4	—
Agricultural Trade:							
Agricultural exports	Million dollars	4,105	6,347	521	326	696	—
Agricultural imports	Million dollars	3,977	4,082	361	269	420	—
Land Values:							
Average value per acre	1957-59 = 100	—	—	131 ³	137 ⁴	139	—
Total value of farm real estate	Billion dollars	—	—	150.8 ³	157.8 ⁴	159.4	—
Gross National Product²							
Consumption ²	Billion dollars	456.7	622.6	608.8	—	649.0	—
Investment ²	Billion dollars	297.3	399.3	390.0	—	418.2	—
Government expenditures ²	Billion dollars	65.1	87.7	85.9	—	94.4	—
Net exports ²	Billion dollars	92.4	128.6	125.2	—	130.0	—
1.8	Billion dollars	7.0	7.7	—	—	6.4	—
Income and Spending: ⁵							
Personal income, annual rate	Billion dollars	365.2	491.4	486.6	511.0	513.8	514.5
Total retail sales, monthly rate	Million dollars	17,105	21,802	21,392	23,317	22,898	22,812
Retail sales of food group, monthly rate	Million dollars	4,159	5,183	5,064	5,338	5,313	—
Employment and Wages: ⁵							
Total civilian employment	Millions	64.9	70.4	70.5	71.3	71.4	71.7
Agricultural	Millions	6.0	4.8	4.8	4.6	4.6	4.8
Rate of unemployment	Per cent	5.5	5.2	5.4	5.0	4.7	4.9
Workweek in manufacturing	Hours	39.8	40.7	40.7	41.3	41.4	40.8
Hourly earnings in manufacturing, unadjusted	Dollars	2.12	2.53	2.53	2.59	2.60	2.60
Industrial Production ⁵							
1957-59 = 100	—	132	131	139	141	141	141
Manufacturers' Shipments and Inventories: ⁵							
Total shipments, monthly rate	Million dollars	28,745	37,129	37,167	38,693	40,340	—
Total inventories, book value end of month	Million dollars	51,549	62,944	60,531	63,382	63,663	—
Total new orders, monthly rate	Million dollars	28,365	37,697	38,184	39,469	40,662	—

¹ Average annual quantities of farm food products purchased by urban wage-earner and clerical-worker households (including those of single workers living alone) in 1960-61—estimated monthly. ² Annual rates seasonally adjusted first quarter. ³ As of March 1, 1964. ⁴ As of November 1, 1964. ⁵ Seasonally adjusted.

Sources: U.S. Dept. of Agriculture (Farm Income Situation, Marketing and Transportation Situation, Agricultural Prices, Foreign Agricultural Trade and Farm Real Estate Market Developments); U.S. Dept. of Commerce (Industry Survey, Business News Reports, Advance Retail Sales Report and Survey of Current Business); and U.S. Dept. of Labor (The Labor Force and Wholesale Price Index).

Each time a housewife buys food for her family she makes a "marketing decision." At different times she buys different food items in different amounts for different reasons.

Price is her main guide; she considers substitute food items, as well as competing nonfood purchases. Other factors also affect her decisions: nutritional value, convenience, personal preference, availability, quality and quantity.

In addition, she and her family eat out during the year, and if last year is any guide, they will spend more on meals away from home this year than last. Total spending for eating out increased substantially last year.

Obviously, the housewife's decision on the kind and amount of food she buys and her family's spending on food outside their home differ from those of other homemakers. But from millions of such diverse decisions comes a national figure on total food expenditures.

The figure last year amounted to \$80 billion. Converted to what the average family spent, it meant a weekly food bill of \$27, or 18.5 per cent of disposable personal income. Food accounted for 18.9 per cent the year before.

For 1965, the total figure is expected to hit \$83 billion. However, with a greater rise in incomes, the proportion of disposable income spent for food will likely continue to shrink.

In considering 1965 prospects for food buying, figures on consumption per person are useful. Over a period of time, per capita consumption responds both to demand and supply conditions. For any one year, however, supply is very influential.

Last year, when supplies of several important food products were relatively plentiful, food



consumption per person rose about 1 per cent from 1963.

This year, food consumption may ease off a bit. Consumers likely will use fewer animal products than last year—principally less pork and lamb, but also less eggs and dairy products. Consumption of beef and chicken may rise some.

A gain in per capita use of crop products is expected. Much of the increase will come about because of recovery of citrus fruit production from previous freeze damage.

Commodity Highlights

Supplies of food **fats and oils** are slightly below last year's record levels. This is due largely to smaller carryover stocks at the beginning of the current marketing year.

Production of edible vegetable oils and butter is higher and more than offsets a smaller lard output.

Disappearance may reach new highs due to increased exports—these may be up 8 per cent this season from 1963/64. Carryover stocks next October 1 will be below a year ago.

Flue-cured **tobacco** growers on May 4 approved marketing quotas on an acreage-poundage basis for the 1965, 1966 and 1967 crops. Growers have been assigned poundage marketing quotas as well as acreage allotments. Up to now, they could market penalty-free all that they could produce on allotted acres.

Similar programs could go into effect in 1966 and later years for burley and other kinds of tobacco. Growers have greater incentive to emphasize quality, rather than quantity under this type of program.

Fed **cattle** prices this summer may dip slightly from recent levels but likely will re-

the agricultural outlook

main above the 1964 third-quarter average of around \$25 (Choice steers, Chicago).

Strong feedlot demand for replacement cattle and the prospect of normal grazing conditions have improved the price outlook for feeder cattle. This summer prices will probably average above last winter's low levels.

Cow slaughter, up substantially so far this year from a year ago, is likely to average around year-earlier levels during the second half of 1965.

Pork production, down 7 per cent in the first quarter from a year earlier, is expected to continue well below 1964 levels throughout the year. This reflects an 8 per cent smaller fall pig crop and an expected similar reduction in the spring pig crop.

Hog prices in May were running about \$20 per hundredweight (barrows and gilts, eight markets), \$5 or \$6 above a year earlier. And with smaller slaughter supplies in prospect the rest of the year, prices may average considerably higher than last year.

Egg price prospects for later this year have greatly improved over earlier indications. Spring chick hatchings were down, indicating that fewer replacements will be added to the nation's laying flock this fall.

Although the rate of lay may resume its upward trend in the second half, egg production late in the year will probably be down significantly from 1964's fourth quarter. This means that egg prices are likely to improve in the fourth quarter of 1965. Until then, prices probably will average below year-earlier levels.

For three succeeding quarters, broiler producers have received higher prices than in the same periods of the previous years. This has encouraged increased hatchery activity that may bring price problems later on this year. Broiler egg supply flocks are now expanding, indicating a more plentiful supply of hatching eggs in the second half of 1965. By late year, prices will likely be under those of 1964.

The number of **turkeys** raised in 1965 will barely exceed last year despite the 4 per cent increase intended by turkey growers in January.

Hatchings through April were the same as in 1964.

Supplies of dressed turkeys were lighter in the first quarter and prices were up slightly from a year earlier. Prices are likely to continue higher through summer and may average about the same as in 1964 during the September-December main marketing season.

Domestic disappearance of **feed grains** in the first half of the 1964/65 marketing year was about 2 per cent above a year ago and April 1 stocks were down 13 per cent. Tighter "free" supplies and higher prices will likely result in a slight reduction in use this April-September from a year earlier.

For the entire marketing year, domestic use may fall slightly below the 133 million tons in 1963/64. Exports are expected to about equal the 18.7 million tons of last year, leaving a carryover into 1965/66 of about 56 million tons. At this level, carryover is down 13 million from the year before.

The total **wheat** supply for the 1965/66 marketing year is estimated at 2,142 million bushels. The May crop report estimated the 1965 winter wheat crop at 978 million bushels. The spring wheat crop was previously put at 261 million bushels in the March planting intentions. Thus, the total crop is indicated at 1,239 million bushels.

Wheat stocks on July 1, 1965, are estimated at 900 million bushels, about the same as a year earlier, and imports are expected to continue small.

This year's Southern **peach** crop (nine states) is expected to be much above last year's short output and somewhat above average, based on May 1 prospects. Larger-than-average California crops of freestone and cling peaches, apricots, plums, sweet cherries and almonds are also expected.

Production prospects aren't so favorable this year for Bartlett pears and other fruits on the Pacific Coast. The nation's strawberry crop is expected to be down about a fifth from last year. May rains aided summer production prospects for crops of Valencia oranges and lemons in California and Arizona citrus groves.



NEW RULES IN THE CATTLE GAME

The rise in cattle feeding has brought about a shift in the location of beef output and in the source of feeder cattle—largely from the western and Plains states to the Southeast and Midwest.

If anyone were ambitious enough to use the feeder cattle market as the basis for a board game, he would need several basic elements. The playing board would be a map of the U.S. The playing pieces would represent ranches, feedlots, rail lines and highways. By maneuvering them on the board, players could get a clear picture of how the livestock industry operates and the changes that have taken place since the 1940s.

Perhaps the most obvious move to be played is the shift in the importance of feeder cattle producing areas. For example, in 1935-39 the 11 western and six Plains states together claimed three-fourths of all beef cows in the U.S. Despite an increase in actual numbers, the West had only 60 per cent of all beef cows in 1960-64. Between the two periods, farmers in the Southeast and Corn Belt increased their stake in cow herds and calf production.

With cotton allotments reduced, the southerners put some of their

cotton land into grass and improved the quality of their herds. As always in the Corn Belt, high corn yields kept land values high and grain production was more profitable than pasture. Because feeding corn improves beef quality considerably, farmers found the grain worth more marketed as beef. So, the practice of feeding grain to feeder cattle in the Corn Belt has remained strong—so strong that calf production from cow herds in Corn Belt areas where grazing is most profitable has increased substantially.

The next move is the change in the source of stocker-feeder cattle production. The western states' share of output of these animals dropped from 70 per cent in the mid-forties to 62 per cent in 1962. Feedlot managers want cheap cattle that are fast, efficient gainers. Southern animals have been successfully competing with native cattle for space in many western and intermountain area feedlots.

Another move in the "pieces" in the cattle industry game since the

1940s is the growth in the importance of concentrate feeding. Over the years, the number of grass-fed cattle sold for slaughter has gradually declined. The feedlot has become an even more important outlet for young cattle. In 1962, western producers marketed roughly 10.7 million head of stockers and feeders. About 9.6 million head went to cattle feeders within the western region—largely in California, Kansas, Texas, Nebraska, Colorado and Arizona. Most of the remaining cattle were shipped to the Corn Belt.

The development of trucks and improvements in highways have played a minor role in the changes in the patterns of feeder cattle movements. Prior to 1930, cattle shipments were largely via railroads. For all practical purposes, they were limited to areas served by rail. Shipments from the South to the Southwest, for example, were indirect and costly. Better highways and trucks meant feeders could be shipped efficiently in all directions. (1)

Output Per Animal During 1951-61 Put the "Bloom" on Fed Beef Boom

The dust has more or less settled over the record advance in fed beef production that took place in the 'fifties. But the "whys" linger on. Some cite supply factors; others are sure the rise in demand caused it all.

Both are partly right. But one factor generally overlooked is the rapid gain in output of beef per animal during 1951-61. The 73 per cent rise in overall beef production was obtained from an increase of 18.6 per cent in cattle inventories—a gain of 46 per cent in output per animal in the yearly inventory. Both of these factors are behind the beef supply explosion.

Animal scientists and producers of breeding animals can provide the background for this case on output per unit. Beef animals have performance standards to meet nowadays. Any beef calf worth his salt weighs in at not less than 450 pounds when 205 days old. Any young bull who doesn't gain a minimum of 3 pounds daily in feeding trials becomes bologna instead of a herd sire. (2)

Feed Grain Program for 1962 Made Sizable Alterations in Use of Land

Did the 1962 Feed Grain Program alter land use on participating farms? The answer is an emphatic "yes." A survey of a group of North Carolina farmers who signed 1962 feed grain agreements indicates participants grew 68 per cent fewer acres of corn in 1962 than in 1959-60. Nonparticipants in the same locality grew about 11 per cent more corn in 1962.

Survey details also reveal that participants in the program used only 14 per cent of their land for corn in 1962, compared with 46 per cent for nonparticipants. The overall use of land for soil-deplet-

ing crops was 50 per cent and 82 per cent, respectively. Participants allowed 21 per cent of their land to be idle even though it wasn't included in the program while nonparticipants used all but 12 per cent of their acreage for crops. Most of the diverted land was in cultivated fallow.

The 142 farmers interviewed were about equally divided between participants and nonparticipants. In comparing the two groups, the researchers found the participants' farms were larger, with larger feed grain bases and higher normal yields. Also, cash crops were the major source of income for more of the participating farmers than for the nonparticipants. Hogs were the most important kind of livestock on farms reporting livestock enterprises.

Participating farmers were largely middle-aged and more of them held part-time jobs off the farm compared with the nonparticipants.

About two-thirds of all farmers interviewed preferred a one-year feed grain diversion program. The remaining producers said they would like to sign five-year agreements. Forty per cent of the participants and about 20 per cent of the nonparticipants said they would be interested in an option to graze their diverted acreage regardless of the length of the program.

However, only 20 per cent of the participating farmers interested in a grazing option said they would be willing, under the one-year program, to accept a 50 per cent cut in their diversion payment in return for grazing privilege. Under a five-year program, 37 per cent were willing to accept smaller diversion payments.

If the payments were reduced 25 per cent (in return for grazing privileges), 37 per cent of the producers would be willing to sign for one year, and about 60 per cent of those interested in a five-year program were agreeable to the reduction. In all cases, fewer

nonparticipants than participating farmers were willing to take any cut in diversion payments.

About 30 per cent of all the farmers surveyed planned to sign up for the 1963 Feed Grain Program, compared with 48 per cent participating in the 1962 program. The major reason given by farmers for not participating in either program was that production was more profitable. Some producers said that they objected to control programs in general, or that they weren't well informed about the provisions in them. (3)

Word-of-Mouth Still Common Source Of Farmers' Marketing Information

It's a rare producer whose farm operation justifies the personal use of leased wire or teletype services for market news. Most get their information indirectly and often aren't aware of the original source.

When deciding when and where to sell steers or feed grains, the farmer is most apt to rely on the information he picked up from fellow farmers or tradesmen. Talking over the day's prices and receipts for livestock and grain gives everyone a chance to evaluate and interpret changes.

Much of the market information used by farmers and tradesmen comes from the federal-state market news system. Price and receipt quotations from major markets are broadcast over the radio and printed in newspapers and trade magazines.

However, only 31 per cent of all respondents in a recent survey of over 400 grain and livestock farmers and tradesmen knew with certainty that the facts they use are supplied by the federal-state system. The respondents were located in the Southwest.

The farmers listed the radio newscasts as their second most important source of market information. They often watched market news on TV, too.

Tradesmen also reported radio news in second place. In reality, they based most of their decisions on their discussions with others in the business. They didn't often have time to read newspapers or trade magazines.

Despite their lack of detailed knowledge about the federal-state system as an information source, nine out of 10 respondents wanted its work continued. One out of every three respondents was in favor of expanding the information to include prices and receipts at local auctions. (4)

Nonfat Dry Milk Output Accelerates; Prices Cause Lag in Commercial Use

Since its commercial introduction in the 1920s, nonfat dry milk has become an increasingly important source of milk solids. U.S. output of nonfat dry milk has risen three-fold since the end of World War II—from 678 million pounds in 1947 to 2,150 million in 1964. Present production is valued at about \$300 million a year.

This sharp increase is due mainly to an adjustment in farmers' milk marketings rather than to larger milk production. Total milk output rose 10 billion pounds from 1947 through 1964 while sales of whole milk gained 44 billion pounds. The big decline in cream sales and farm use of milk made the big increase in commercial supplies of milk possible.

Domestic disappearance (including government donations) of nonfat dry milk also has risen since 1947. The increase is due largely to the introduction of small packages for home use, promotion by manufacturers and CCC donations to needy families, schools and institutions.

Still, domestic sales haven't risen as fast as production because prices under government support programs have been above the level at which food processors and other purchasers would use all the available sup-

plies of nonfat dry milk. This was particularly true in 1962 and 1963, when commercial use dropped below the record level in 1961. From 1947-49 to 1961, commercial use gained 146 per cent, but output rose 317 per cent. During 1964, use increased 3 per cent from a year earlier and totaled 1,111 million pounds. But even so, it was 2 per cent below the high point of 1961.

Exports of nonfat dry milk became important because of the impetus of government programs during World War II. After the Korean conflict, a gain in government acquisitions made additional expansion of overseas donations possible. Export sales, including barter, entered the picture and some nonfat dry milk was purchased with foreign currency under P.L. 480.

At present, the U.S. is the leading exporter of nonfat dry milk and in 1964 shipments were a record 1,306 million pounds. (5)

Herds Grow, Output is Up; Yet Few Young Farmers Enter Dairying in Minn.

Who will do dairying in the future?

A Minnesota survey gives a few of the answers by casting back over the past few years. To get their information, the researchers surveyed 330 farmers each year from 1959 to 1963.

The study adds a note of caution: Projecting answers from the recent past to the immediate future is one thing; trying to see beyond to, say, 1970 is a far chancier proposition.

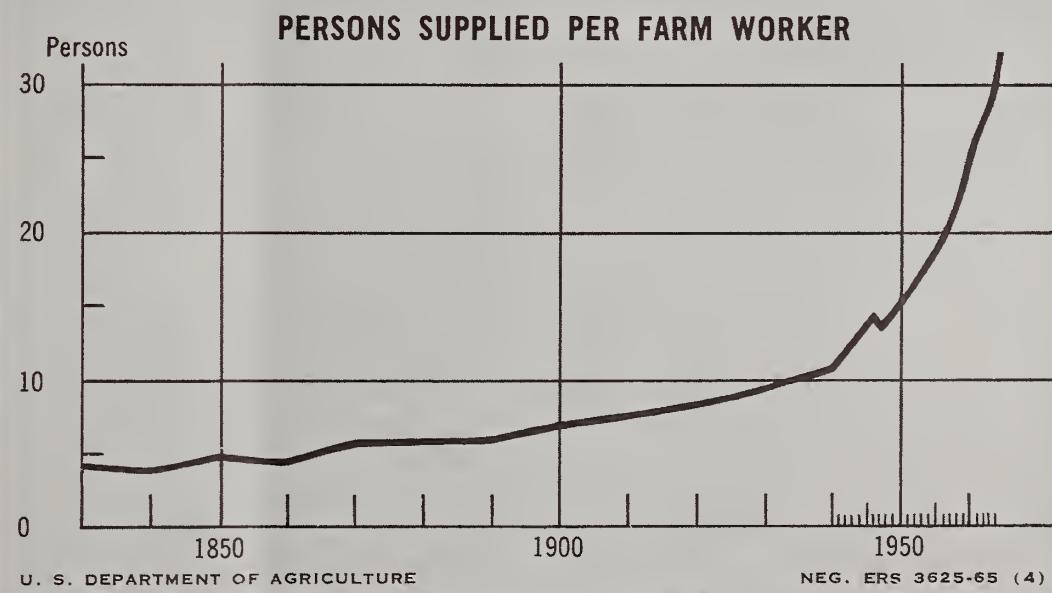
Key indicators of future change are:

Size of herd. The larger the herd the farmer had in 1958, the larger his increase in production by 1963. An increase in cropland usually went along with the growth in herd size.

Willingness to borrow. The more money the farmer was will-

PRODUCTIVITY PAR EXCELLENCE: In 1964, the average American farmworker produced enough food, fiber and tobacco to supply himself and 32 others, roughly seven times as many as a century ago. Five of today's consumers are foreigners using U.S. farm exports.

A relative handful of farmers are able to supply so many others with their products nowadays because of improved technology—both on and off the farm. On the farm, improvements have been made in seeds, feeds and livestock breeding, in techniques of crop cultivation and harvesting, in more efficient use of labor. Off the farm, the changes have been in output and quality of fertilizer, in development of farm machinery and in the manufacture of hundreds of smaller pieces of equipment and supply items used in farm production. Thus, urban workers who are employed by the firms supplying farm inputs contribute to the ever-increasing rise in agricultural productivity. (6)



ing to borrow, the more he expected to increase production. More significantly, the more he borrowed, the more he actually increased production between 1958 and 1963.

Expected price changes. Farmers who expected milk prices over the following five years to be at least as favorable as 1959 (compared with beef and hog prices) responded by increasing milk production. But, expectations for year-to-year changes had little effect on plans for the herd.

Age of the operator. The older the man, the less chance he might expand his dairy. Few farmers over 50 or 55 even expected to enlarge the dairy; fewer still actually did expand. Instead, most intended to cut back on the herd.

Off-farm jobs. Many of the farmers who had an extra job, or were looking for one, had already cut back on the size of the herd.

New dairymen. Virtually no farmer without a dairy enterprise in 1958 planned to get into dairying; milk production in 1963 was almost exclusively the work of men who had been in the business in 1958. (7)

Farm Workers Who Add Nonfarm Jobs Off Season More Than Double Income

Who helped plant and harvest the crops, take care of the livestock and run the farm machinery during 1963? Roughly 3.6 million persons did some farm work for wages, according to a recent ERS report. The 1963 hired farm worker estimate is about the same as the figure for 1963.

About three-fourths of the farm wage workers were male, about 70 per cent were white. The median age was around 27 years. A majority lived off the farm.

The chances were about a toss-up that the farm laborer lived in the South, and nearly nine to one that he worked in the same county where he lived. The odds were two

"Slim" Beans

Soybean supplies are larger this year—732 million bushels compared with 714 million on October 1, 1963. The increase is due entirely to a larger carryover into 1964/65. The 1964 crop was little changed from 1963 production.

Soybean crushings during the 1964/65 marketing year are expected to total around 470 million bushels. They accounted for 441 million in 1963/64. Exports also are likely to be up. The estimates are for about 205 million bushels shipped abroad in 1964/65, compared with 191 million a year earlier.

After subtracting domestic use, exports and an allowance for seed, feed and loss, stocks of old-crop soybeans on September 30, 1965, are expected to be rather low—about 10 million bushels compared with 32 million a year ago. Ten million bushels is equivalent to not quite one week's needs. (9)

to one that the typical farm wage worker didn't do any nonfarm wage work during the year.

Farm wage workers are separated into two groups depending on the number of days they work in the year. Casual workers are those employed on farms less than 25 days. During 1963, these workers numbered 1.7 million and averaged nine days of employment for which they earned an average of \$54. The noncasual group (those who worked 25 days or more) totaled 1.9 million, were employed 138 days and earned \$883.

In general, hired farm workers who did some nonfarm wage work in addition made more money than those who worked only on farms. Roughly 1.1 million did both types of wage work in 1963. They earned an average of \$6.50 per day for 47 days of farm work and \$10.75 per day for 97 days of non-farm work. As a result, their wages for the year came to \$1,361.

Workers who were employed only on farms averaged \$564—less than half the annual wage earnings of those with both types of work—or \$6.30 per day. (8)

Demand for Cottonseed Oil in Foods Expected to Trim Carryover Sharply

When the 1964/65 marketing year for cottonseed oil ends July 31, the carryover is expected to be around 400 million pounds, a third less than last year.

The cottonseed oil supply in 1964/65 is estimated at 2.6 billion pounds, about 5 per cent more than a year earlier. The gain is due to larger starting stocks—611 million pounds (crude and refined) on August 1, 1964, compared with 514 million on August 1, 1963. Subtracting estimated disappearance—domestic and export—of 2.2 billion pounds leaves the 1964/65 carryover.

Crushings of cottonseed will be about the same this year as last. The estimated crush for the 1964/65 season of 5.9 million tons will produce about 2 billion pounds of crude cottonseed oil, assuming a yield of 335 pounds per ton. Supplies of cottonseed (starting stocks plus the 1964 crop) are estimated to total 6.4 million tons. This is roughly equal to supplies in 1963/64.

Domestic use of cottonseed oil is placed at 1.5 billion pounds in 1964/65, compared with 1.4 billion last season. Cooking and salad oil is the major outlet for cottonseed oil and accounts for about three-fifths of domestic disappearance in recent years. However, more cottonseed oil is going into manufactured shortening and margarine this year compared with 1963/64 because the price differential between it and soybean oil and lard has been narrow.

Cottonseed oil exports are expected to total 650 million pounds by July 31, 167 million more than a year ago. The gain is due largely to an increase in foreign donations of CCC oil under Title III of P.L. 480.

Cottonseed oil prices have risen steadily from 10.3 cents per pound in August 1964 to 12.8 cents this April, averaging 11.8 cents. (10)

Much prime farmland is in the path of urban expansion. And some people believe the only way to save it from developers is to separate the value for development purposes from the land itself.

CROSS-COUNTRY CONTEST: TRACTORS VS. BULLDOZERS

A group of farmers from Santa Clara County, California, have proposed a unique experiment for their county and two other areas. All desirable farmland in these three counties would be appraised to determine (1) agricultural value and (2) nonagricultural value. The difference in value, or development rights, would be bought by a public agency. The deeds to the land would be restricted to agricultural use and sale.

This sort of negative easement would be similar to other permanent easements—access, scenic and open space—being purchased today throughout the nation.

Farmers from Santa Clara County are concerned because 100,000 acres of prime land have gone under the bulldozer in the last 10 years in spite of protective zoning laws. Agricultural zoning districts — “greenbelts” — have



only slowed the bulldozers down, not stopped them.

Counties in 16 states have greenbelt zoning districts. Only agriculture and a few related uses are allowed. In other states, large-lot zoning discourages uses other than farming by requiring minimum tract sizes much larger than feasible for subdivisions.

But such zoning districts tend to break down in the face of economic, tax and political pressures. Zoning districts are set up by political bodies at the request of property owners and they can be undone in the same way. The closer the farmland to the urban fringe, the more intense the pressure to rezone. Rising taxes and land values help drive agriculture out.

BOOMING LAND VALUES. When subdivisions, industry and business get a toehold out among the farms, nearby land values boom, special zoning district or no special zoning district.

Prices rise considerably above the value of the land for farming. Developers were paying \$20,000 an acre for prune orchards in the Cupertino greenbelt in Santa Clara County in 1964. The agricultural value of the land and trees was \$1500.

Some farmers will sell out and invest their money elsewhere. They can often get a much greater return than can possibly be realized in agriculture. Others, to whom farming is as much a way of life as a business, will hang on. But it may be expensive.

HIGHER COSTS. Farmers may have to use less potent, less effective insecticides because a subdivision has moved in next door. Orchard owners may have problems with pests and diseases harbored in unsprayed trees in homeowners' backyards. Children may take fruit or break tree limbs. There may be additional expense in making a farmer's land safe for more small trespassers. Or more insurance may be needed. Competition for available water will stiffen, running up a farmer's

irrigation costs. But even if the high cost of farming in an urbanizing environment doesn't force a farmer out, taxes may.

PROPERTY TAXES. The tax collector can't very well ignore the change in the value of the land. Most state constitutions require that *assessed valuations* be based on the prevailing market price



of land, not its value in current use, such as agriculture.

Tax *levies* go up, too. Developing areas need more streets and schools. Public water mains and sanitary and storm sewers have to be paid for. Other public facilities and services are soon needed —parks and playgrounds, school bus transportation, police and fire protection, garbage collection.

Farmers have already paid for the public facilities they need. They neither need nor want (nor can afford) some of the facilities and services required by their new nonfarm neighbors.

Higher tax levies on higher *assessed valuations* multiply the tax bill. According to the Santa Clara farmers, property taxes per acre on one Cupertino prune orchard were \$380—81 per cent of average gross income per acre.

Even in the states (Maryland, Florida, Hawaii and Oregon, for

example) that allow *preferential assessment* of farmland, only the assessment is held down. Tax levies per \$100 of assessed valuation still go up.

If a farmer manages to stay in business in spite of suburban encroachment, his farming operation often dies when he does.

INHERITANCE TAXES. Land that can be sold for five and ten times its agricultural value may not be farmed very long after the inheritance tax assessor has been by. Many times, this tax exceeds the actual value of the land for agricultural purposes. In the case of the Cupertino orchard, inheritance taxes are estimated at \$2,500 an acre, \$1,000 more than the farm value of the land. (11)

Neb. Has "Get-Things-Done" People, Governments as Holdrege Story Shows

"Get resuscitators, fast! The boys are drowning!"

There were no resuscitators in the Nebraska town back in the mid-1940s. The irrigation ditch claimed its toll.

"We need an emergency rescue unit," said the people. So town officials talked to county officials. Together they found they could afford \$7,800 to buy and outfit a rescue truck. The people chipped in to buy resuscitators, first aid kits, blankets, diving helmets and other gear.

Today the city and county still share the cost of the rescue unit which, the city clerk says, will go anywhere. It's been known to answer calls 20 miles away.

"Look! The signal lights just went on! Back to the station, quick!"

It was 3:21 a.m. on a snowy morning in the early 1950s as the cruiser rushed back to the police station.

"The state highway patrol lets us use its radio, but it goes off the air at 2 a.m. We shouldn't have to rely on strings of special lights along the street to summon our

patrolmen," said the town's police chief. The county sheriff concurred. Result? A 24-hour radio network run jointly by town and county.

This city where people get things done is Holdrege, Nebraska, population, 5,226; work force, 3,792; government employees, 47; police officers, 6. It's mostly a retail merchandising center, servicing some 25,000 people.

Holdrege is surrounded on all sides by its partner in "let's-get-this-thing-done" projects—Phelps County. But cooperation doesn't stop with the county. When Holdrege answered a recent ERS questionnaire it reported joint enterprises with seven other government units, from School District No. 44 to the Nebraska Public Power System.

The Holdrege questionnaire was one of 125 returned to ERS researchers by small towns throughout Nebraska. Purpose of the study was to see just how much people, and especially governments, in rural areas would willingly cooperate to improve life in their communities.

In years past Holdrege has built a civic auditorium, a hotel, and a home for the aged—all by public subscription. Today its citizens are hard at work raising money for a new hospital. Working just as hard are their Phelps County neighbors. The town-county committee has already raised \$300,000. (12)

Steady Work, Good Pay—Two Things Farmers Most Want in a Second Job

When farmers go hunting for second jobs, they find them faster—and find better ones at that—when there is an industrial center nearby.

A recent study by ERS in cooperation with the Michigan Agricultural Experiment Station points up some advantages of having urban neighbors for the farmer who wants to moonlight.

The advantages are even more apparent when the "second job" is the main source of income.

The study surveyed the work preferences and kinds of second jobs held by 89 farmers in the industrial southeastern portion of the state. The off-farm job involved at least 100 days of work a year.

According to the study, four out of five of the two-job farmers had a skilled or semiskilled job.

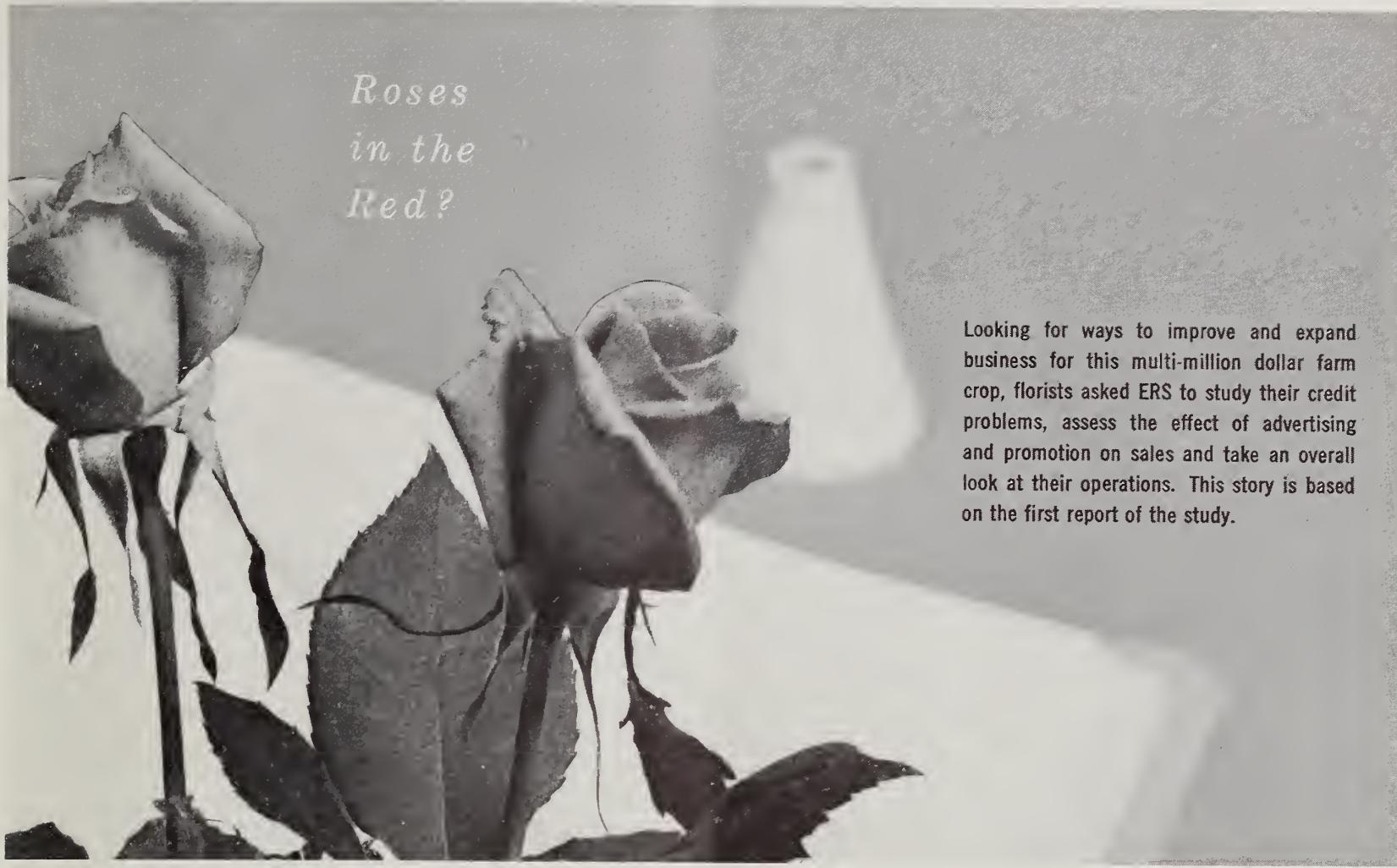
However, it is the older man who is more apt to have the skilled job. Men under 40 years more commonly do unskilled work.

"Stability" turned out to be the most important aspect of the non-farm job when the men rated the importance of elements of their work. Stability is important because nonfarm work was the main source of income and farming was supplemental. Thus, income from the nonfarm job came in a close second to stability in the scoring.

These two preferences were way ahead of any other the men wanted in an extra job or liked about the one they had. After them came a mixed lot of reasons having to do with work conditions and the kind of life involved in holding down two jobs. Main preferences were: A good community to live in; chance for advancement on the job; a good supervisor; good working hours or shift at the plant; reasonable commuting distance; and desirable fringe benefits.

Oddly enough, less than a third of the part-time farmers were interested in any training program to improve their job potential. And, though the younger men showed more interest than the older ones, only half of these farmers under 30 years of age were interested in any training program, even if they would not have to pay for it. (13)

(For a statistical profile of the part-time farmer in the national scene, see "Industry by Day, Agriculture by Night," The Farm Index, Nov. '64.)



*Roses
in the
Red?*

Thousands of June brides will walk down the aisle carrying sprays of orchids and nosegays of roses. But will thousands of fathers pay for the flowers in July?

For the 20,000 florists in this country almost every new order for flowers carries an implied credit risk.

Up to 75 per cent of all flowers are sold by telephone, usually to an unknown voice. Refuse an order and the florist may lose a credit-worthy customer. Accept

an order and he may get saddled with a bad debt. The upshot is that most florists accept all credit orders, whether by telephone or store visit.

It's long been thought that florists incur a higher bad debt loss in relation to gross sales than do most businessmen. And because of this supposedly poor collection record, it's been assumed that florists are poor credit risks themselves.

Results of an ERS study of 46 retail florists—all those known to

exist in four Iowa cities—show both assumptions just aren't true. The 46 firms reported total gross sales of more than \$3 million in 1963. Of this, only \$28,000, or 0.9 per cent had to be written off as noncollectible.

As for the florists' own credit ratings, officials of 12 banks surveyed said florists got loans as easily as anyone else provided they met the qualifications required for all business loans.

It took the Iowa florists about \$6,000 on the average to start

Who's Your Florist?

According to the four-city survey in Iowa your florist is:

—An independent businessman. Over half the firms surveyed were single proprietorships. Another 30 per cent were partnerships. Only seven of the 46 firms surveyed were incorporated.

—A hard worker. Most shops were open nine to 10 hours, six days a week. And many employees worked Sundays, too, arranging flowers. In addition, almost all florists had facilities for accepting orders when the shop was closed—either through an answering service or a phone that rang in their own home.

—A skilled artisan. Floral arrangements are all created by hand so florists can't turn to automation to cut costs. For every \$17,000 to \$19,000 increase in business, the florists surveyed had to hire another arranger. Also, many of the men grew their own potted and bedding plants.

—A responsible citizen. The average florist belonged to three or more civic groups. He had been a florist for 17 years and lived in the same community 31 years. The larger firms often dated back as far as 1916, the medium size from 1929 and the smaller businesses from 1945. Sixteen of the 46 owners surveyed had parents in the florist business before them. (14)

their businesses. Forty-three per cent of them had used long-term credit to get started and nearly all had gotten credit from banks. Forty-one per cent had used short-term credit, again mostly from banks, to finance equipment and meet initial bills.

Value of fixed assets in 1963 averaged \$21,568 per florist shop. Value of nonperishable inventory (vases, wiring and the like) averaged \$3,111; flowers, plants and other perishables, \$427. Inventory averages were for any Thursday-Saturday period, not counting holiday weeks.

Several trends showed up in the Iowa study that should help florists in other parts of the country in their daily guessing game to determine which customers should be allowed to purchase flowers, potted plants and the like on credit, which shouldn't.

Management credit controls. Fewer losses occurred in florist shops where credit could be extended only by the owner or with the owner's approval. Where this authority was delegated to employees below the management level, the number of bad debt losses rose sharply, sometimes doubled.

Customer screening. Most of the florist firms accepted telephone orders with minimum or no credit checks on the customer. Many used a credit guide. Some found it helpful to circulate the names of slow-paying customers among themselves, but conceded this didn't lower the amount of bad debts outstanding.

COD status for delinquent accounts. Placing customers on a "COD only" basis when a bill went unpaid for more than 90 days helped lower the number of non-collectible accounts. Ten of the 46 florists also added a service charge to delinquent accounts. They reported that the service charge—either threatened or actually imposed—was a useful tool in effecting payment of delinquent accounts. (15)

Not Whole, Not Skim, Low-Fat Milk Is Compromise Candidate That Sells

The dairy industry is trying the middle road between whole milk and skim milk to hold on to per capita sales.

Per capita consumption of fluid whole milk has been dropping recently, from 295 pounds in 1956 to an estimated 270 pounds in 1963.

Meanwhile, the use of skim milk items has been on the upswing, going from about 21 pounds per person to a little more than 29 pounds in 1963.

Somewhere between these two sets of figures a relatively new low-fat milk product may find a profitable market for some segments of the dairy industry. The product makes its appeal to the diet conscious, while providing a flavor attractively close to whole milk.

Low-fat milk contains about 2 per cent butterfat, on the average, and about 10 per cent other solids. Whole milk usually runs to 3.25

per cent or more butterfat, with approximately 8.5 per cent nonfat solids. Low-fat milk is generally fortified with vitamin D; about half the time it contains added vitamin A.

Since 1949, when low-fat milk was introduced in midwestern markets, sales have risen steadily, reaching an estimated level of 620 million quarts in 1963. Sales of whole and skim milk amounted to about 24.5 billion quarts. If present trends continue, sales of low-fat milk may reach an estimated 1.8 billion quarts by 1970.

A recent study rates the impact of low-fat milk on the market for beverage milk and suggests its future effect on milk sales.

The report includes figures on marketing practices for about one-third of the milk processing plants in the nation. The information was gathered by the Economic Research Service. Also included are data from a survey by the Statistical Reporting Service of households in Milwaukee and New Orleans.

In most regions of the country, according to the study, sales of low-fat milk exceeded regular skim milk sales. Retail prices for the low-fat milk were generally a cent to 3.5 cents a quart below whole milk. The price differential depended on whether the product was sold through retail stores or on home delivery routes.

In the decade or so that low-fat milk has been generally available, the product hasn't managed to upper capita consumption of milk. But it may represent a gain in one way: It helps the industry retain some customers that whole milk isn't holding on to.

In Milwaukee, where low-fat milk has been available since 1951, about 15 per cent of the families interviewed had used low-fat milk within six months of the survey. In New Orleans, where low-fat milk has been available only since 1957, about 6 per cent of the families had used low-fat milk within six months of interviews.

WHAT'S NEW IN MARKETING RESEARCH

With this issue The Farm Index begins a monthly note on significant new projects in marketing research to be undertaken by or for the Economic Research Service:

An Economic Analysis of Trends in Grain Transportation in the United States. From regional studies already completed, this project will summarize data on trends in grain transportation for the entire United States—changes in the grain marketing structure and extent of shifts in grain transportation. The report should be available by the end of 1966.

Transportation of Raw Cotton by Motortruck in the Southeastern United States. This study will include an examination of truck operations, rates charged and services provided in transporting raw cotton. The report is scheduled to come out late in 1966. (16)

Low-fat milk makes its primary appeal to diet-conscious customers. More than eight out of 10 of the families using low-fat milk had a dieter or weight watcher in the household. Low-fat milk is also more apt to be tried by the relatively high-income household.

The majority of the families using low-fat milk in both cities were satisfied with the price. However, a somewhat higher proportion of families in New Orleans thought the price they paid was too high. In New Orleans, low-fat milk was not only more expensive than it was in Milwaukee, but it also cost more than whole milk.

Any future benefit to the industry derived from the sale of low-fat milk will depend on a combination of new or additional users, as well as the product's ability to hold on to defectors from whole and skim milk. (17)

Milk Distribution Patterns in South To Change Little Over Next Decade

If any one group in agribusiness would like the services of a crystal ball, milk handlers in the southeastern states probably are it.

As the Southeast rapidly changes from a rural to an urban economy, the characteristics and location of the milk drinking population are altered. Milk processors have a difficult time anticipating and keeping apace of these changes. The number of processing plants has been on a steady decline. Those remaining in business are understandably concerned about the future.

ERS and experiment station specialists have estimated supply and demand for milk in the Southeast to 1975 and tried to determine future distribution patterns. Alabama, Florida, the Carolinas and the eastern two-thirds of Tennessee were included in this study. For part of the analysis, the states were divided into marketing areas.

Projections of demand for grade A fluid milk in the South (using 1955 prices and price relationships) indicated that 7 to 7.8 billion pounds could be marketed in 1975. At this level, sales would be roughly half again actual marketings in 1955. However, future demand varied from state to state—the gains ranged from about 10 per cent for Tennessee to 150 per cent in Florida.

Prospective supplies of fluid milk in 1975 are likely to be between 6.5 and 7.7 billion pounds, according to the analysis. The lower level assumes that supplies will increase just enough to meet the demand for fluid products. The higher level is based on production increasing at the same rate from 1963 to 1975 that it did from 1950 to 1963. This output would provide some surplus milk for ice cream and other manufactured products.

In order to develop milk distribution patterns for 1975, specialists first had to put 1959 patterns on an equilibrium basis. An equilibrium exists when additional shifting of fluid milk from one area to another will no longer increase the handlers' profits.

When the equilibrium pattern was in effect for 1959, the extra milk in Tennessee, the only area with surplus output, was sold in the Carolinas and Alabama. Price relationships were such that surplus supplies from the Midwest were shipped in, too. Sales estimates were higher than actual sales in 1959 for all the states except Tennessee.

By marketing areas, the volume of fluid milk and ice cream sold in each area at equilibrium was about the same as the actual 1959 figure. However, the movement of milk and products from one area to another was reduced.

At the minimum level of demand for milk in 1975 (7 billion pounds), the volume of milk sold for fluid use would be about the same regardless of changes in the supply. Movement of surpluses

from one area to another would be similar to the 1959 situation. This indicates that handlers in North Carolina could expect to sell their extra milk in South Carolina and Florida. Processors in Tennessee could sell their surplus in Alabama and Georgia.

The research also indicated that the wholesale price of milk for fluid use in 1975 probably will be higher than in 1959; that for ice cream will be lower. As a result, a smaller proportion of the grade A fluid milk will be purchased for fluid use with the remainder going into ice cream. (18)

Entire Food Industry, Except Sugar, Showed Marked Profit Gain in 1964

Total net income, that is, profits after taxes, of 166 leading food manufacturers hit \$917 million in 1964, a 13 per cent increase over 1963.

Except for sugar manufacturers, net income as a per cent of sales was higher by 0.1 to 0.3 of a percentage point for each food manufacturing group.

Again, except for sugar, net income as a per cent of net assets, that is, stockholders' equity, was higher in 1964 for all food groups—baking, dairy products, meatpacking and "other" food products.

The same upswing in profits held true for manufacturers of nonfood farm products. Net income as a per cent of sales was up from 1963 in all categories—brewing, distilling, tobacco products, textiles and clothing.

Retail food chains did well, too. At \$307 million, total profits of 61 leading companies were 15 per cent above 1963.

Department and specialty stores were also part of the higher profit picture. Total net income (profits) of 80 such firms came to nearly \$334 million.

Figures were compiled from data of the First National City Bank of New York. (19)

Makers of Poultry Feed Cut Costs By Cutting Outer Fringe Customers

Growing and marketing poultry in New England is a highly competitive business. It's so competitive, in fact, that ERS is cooperating with agricultural experiment stations in the region in analyzing the entire poultry marketing system. Objective? To find out what adjustments poultry growers, processors and related industries can make to improve their position.

Newest in the research series is an economic analysis of how manufacturers of broiler feeds can cut unit costs, made by the University of New Hampshire Agricultural Experiment Station.

One way, the analysis shows, is by increasing plant size. This works—up to a point.

Another way is to locate the feed mill in a high density poultry producing area. This will cut distribution costs by concentrating deliveries of feed within a relatively small radius of the plant.

These conclusions were reached after economists analyzed manufacturing and distribution costs for eight model mills, using cost data from actual feed mix plants in the New England area. The model plants ranged in size from

an annual output of 5,435 tons of feed all the way up to 90,577 tons.

For each plant size the specialists then calculated the cost per ton to manufacture and deliver feed within a 90-mile radius of the mill. Poultry production in the area was so sparse it required only 1.31 tons of feed per square mile. Similar calculations were made for an area with a radius of 47 miles where a higher production density called for 6.55 tons of feed per square mile. A third area, with a radius of only 30 miles, had a density level of 32.73 tons.

Dollars and cents savings that accrue from increasing plant size and distribution density are shown in the table below.

First, take plant size alone at the 1.31 ton density level. *Manufacturing costs* drop steadily as plant size goes up so that firm G, with an annual volume of 67,933 tons, can produce each ton of feed for \$4.30—about half the cost for firm A, which produces only 5,435 tons a year.

But—and it's a *big* but—look at *distribution costs* as plant size increases in this low density area. At \$6.96 a ton, it costs big firm G nearly twice as much to deliver feed over this wide area with few poultry producers as it does firm A.

In this situation firm E, a medium size outfit, can operate at the lowest total cost—manufacturing plus distribution—of all the models considered.

Firm H, largest of all, at 90,577 tons a year, can't even operate at this density level—proof that plant size alone doesn't determine the proper scale of operations.

However, when distribution density gets up to 6.55 tons per square mile, firm F can operate most cheaply. And when poultry production gets really concentrated, so that the mill can sell 32.73 tons per square mile, firm H takes over, producing and delivering for nearly \$4 a ton less than small firm A.

Just the same, there's a silver lining in the analysis even for smaller plants. Follow firm A across the table as the density levels increase. Although firm A can't compete with the big firms at the highest density level, it can cut costs in relation to its own performance at lower density levels.

Firm A's manufacturing costs remain constant. But its distribution costs drop constantly as density increases, from \$3.73 a ton to \$2.44 and finally to \$1.91.

Thus, even a small firm would benefit by moving into a high density area. (20)

DELIVERY AREA VIES WITH PLANT SIZE IN FIXING LOWEST COSTS FOR FEED MILLS

Feed mill ¹	Annual volume	Cost to mills per ton of feed at—								
		1.31-ton density level			6.55-ton density level			32.73-ton density level		
		Manufacturing	Distrib- uting	Total	Manufacturing	Distrib- uting	Total	Manufacturing	Distrib- uting	Total
	Tons							Dollars		
A	5,435	8.59	3.73	12.32	8.59	2.44	11.03	8.59	1.91	10.50
C	16,302	6.29	4.63	10.92	6.29	2.69	8.98	6.29	1.73	8.02
E	32,609	5.23	5.23	10.46	5.23	2.83	8.06	5.23	1.80	7.03
F	45,287	4.68	4.68	10.75	4.68	3.14	7.82	4.68	1.89	6.57
G	67,933	4.30	4.30	11.26	4.30	3.57	7.87	4.30	2.06	6.36
H	90,577			²	4.01	3.98	7.99	4.00	2.23	6.23

¹ Models B and D are not used in this comparison because volume handled was not comparable to that of processing, assembling and hatching units compared in

previous studies in the series. ² Firm H cannot distribute at this density level.

Inland or Farther North Mean Higher Prices for Southeast Hog Producers

When it comes to prices received for hogs, producers in the Southeast are better off if they live in Virginia rather than in Florida, in the Piedmont rather than along the coast.

In tidewater Virginia prices received for barrows and gilts in 1959/60 were 61 cents higher than the regional average, whereas in western Florida they were \$1.38 below the average.

As for coastal-Piedmont differences, prices were 6 cents below the regional average in eastern South Carolina but 19 cents above average in the western half of the state.

Economists at southern agricultural experiment stations, in cooperation with ERS, have worked out these comparative prices for hogs in 19 areas of six states—Virginia, North Carolina, South Carolina, Georgia, Florida and Alabama. Prices are based on those at Thomasville, Georgia, the only buying station in the region that reports to USDA.

The study compares prices received by southeastern hog producers with those received in the Corn Belt, the nation's top hog producing area. Prices at Thomasville averaged \$16.41 per hundred-weight in 1959-63. In Raleigh they were up to \$17.23. Prices during the four years averaged \$16.50 at Kansas City, \$16.53 at St. Paul. (21)

The Big Cheese Is the Big Deal As Barrels Move In, Cheddars Move Out

Call it a flat or a junior twin, a daisy or a longhorn, a block or a barrel. Whatever the name, it is a few ounces or a few hundred pounds of American cheese, and it's more apt to be big than small.

American cheese comes in wheels, cones, cylinders and blocks, depending on the needs of

the processing industry or the retail trade. And big and bigger sizes are being used increasingly in recent years.

When the 500-pound barrel cheese was introduced in the mid-1950s, it soon became the leading style, now accounting for nearly two-fifths of annual warehouse receipts.

Some of the largest cheeses, such as the mammoth style which may weigh several thousand pounds, are primarily attractions for advertising and promotion.

The cylindrical, 70- to 78-pound Cheddar was the leading style of American cheese up to the introduction of the barrel. Between 1950 and 1957, the Cheddars averaged about 45 per cent of warehouse receipts. By 1960 they had dropped to 8 per cent and today run to something less than 5 per cent.

Some of the decline in the Cheddar style was also caused by expanded use of 40- and 60-pound blocks. The 40-pound block has grown steadily in importance because it is easy to cut and pack and cutting losses are low.

The large styles of American cheese have grown in popularity with increased sales of prepackaged cheese in food stores. All large styles combined made up nearly 90 per cent of total annual warehouse receipts in 1964; in 1950 their share was about 75 per cent.

Small cheeses have dropped from roughly a quarter to about 10 per cent of total receipts. Main reason the small styles lost out is that there is less cheese being cut to customer order at time of sale.

One development that helped push the trend to larger cheese sizes was the introduction of new packaging materials after World War II.

Plastic wrappings, for example, have replaced the old cotton and wax bandages and no trimming is needed. The rindless block styles can be cut directly into small sizes for consumer packaging. (22)

Vitamin Booster Scheduled Soon For Dry Milk in the Foreign Aid Market

In Ghana, as in other parts of Africa, "kwashiorkor," a protein deficiency disease, saps the energy and life of countless children.

In the free city of Hong Kong a million refugees from Communist China live on the sidewalks, the rooftops, in squatter huts or on floating sampans.

The developing world, represented by these two corners of undernourishment, has long benefited from American shipments of food. It will soon benefit further from a new program for milk.

Starting in fiscal 1966 (beginning July 1 this year), at least part of the nonfat dry milk exported for child feeding programs under Food for Peace will be fortified with vitamins.

At present these nonfat dry milk shipments are U.S. extra grade but not fortified.

The Agency for International Development, which administers the donation programs of Food for Peace, will make available \$1.5 million in the 1965 fiscal year for adding vitamins to nonfat dry milk.

Specifications call for adding 5,000 U.S.P. units of vitamin A and 500 units of vitamin D per pound of nonfat dry milk.

The United Nation's Children's Fund has been adding vitamins to nonfat dry milk for several years. However, UNICEF use of U.S. nonfat dry milk was less than 50 million pounds in 1964. In the same year, total donations under Food for Peace ran to about 500 million pounds.

When the child suffering from malnutrition in Ghana has received milk for three or four weeks, the improvement is miraculous.

When the refugees in Hong Kong receive the milk along with wheat flour and cornmeal in the form of noodles, one corner of the free world is a little stronger. (23)

THE RIVER TWINS

The two Congos share name, border and economic problems. Yet the mighty river actually separates unlike nations.

A few miles west of Leopoldville the Congo River begins its descent to the sea, dropping 852 feet in the 220-mile stretch to the port of Matadi. This last turbulent passage not only blocks navigation between the Atlantic port and the capital, but also creates a huge hydroelectric potential for the Republic of the Congo.

One day the proposed Inga hydroelectric system will harness this overwhelming force, providing as much electricity as all of western Europe now uses.

Even without the Inga project, the Republic of the Congo has the greatest economic potential in central and west Africa. With a climate ranging from temperate plateaus to the tropical Congo River basin, the country produces a wide variety of crops for home use and export. It is also the leading producer of industrial diamonds and a major producer of copper, cobalt, uranium and other minerals.

But the former Belgian Congo has a long way to go before it is in sight of economic headwater.

The typical Congolese farmer even today clears a couple of acres

of forest land or savanna, plants them to subsistence crops and adds a few chickens, goats, sheep or hogs.

The tsetse fly, carrier of several human and animal diseases, inhibits cattle raising. And livestock maintained in the higher elevations of the eastern Congo lend prestige to their owners but have little economic value.

Not surprisingly, though per capita food consumption in the Congo is adequate, diets are overloaded with starches from cassava and other root crops, woefully short on proteins.

When the Congolese farmer manages to come up with a surplus, he has a hard time getting it to market because of the poor roads and disconnected railroad system. Even commercial export crops are delayed on their way to market by the fragmented transportation system.

Though the Congo River provides uninterrupted transportation for the 1,100 miles between the capital and Stanleyville, rapids make the river impassable at Stanleyville as well as between Leopoldville and the Atlantic.

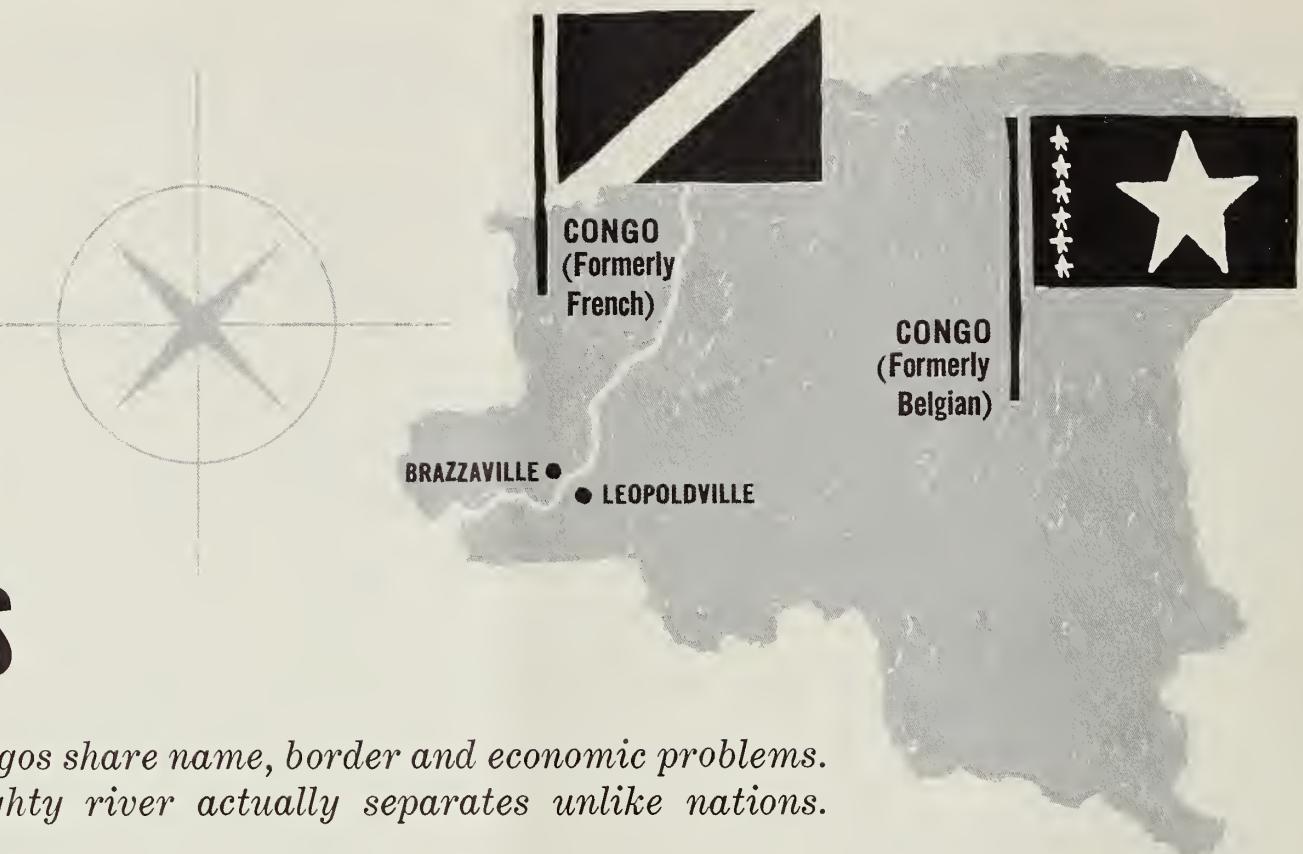
Such progress as the Congo has been able to make, despite these obstacles, was brought to a standstill by the political confusion that followed independence in June 1960.

Production of the principal export crops is down. Palm oil, for example, dropped from an annual average of 321,000 metric tons in 1959-61 to a level of 283,000 forecast for the 1964/65 crop year.

Food crops for domestic use have suffered a similar fate. Production of cassava (manioc) in 1959-61 was estimated at an annual average of 6.4 million metric tons. It is currently forecast at 6.2 million metric tons. Most of the other basic food crops have also fallen off.

With reduced agricultural production, the troubled republic has had to step up agricultural imports. They now equal about a fourth of total imports, a rather high proportion compared with other tropical nations in Africa.

The United States, far and away the largest supplier of farm products, accounted for well over half the imports. Most of the shipments were under Food for



Peace supply programs.

In 1963, the U.S. supplied between 80 and 90 per cent of such principal imports as wheat flour, dry milk and cream, rice and corn. We also shipped 44 per cent of the tobacco imports and nearly a half of all canned meat.

Other important suppliers of farm products in 1963, all far behind the United States, were Zambia (formerly Northern Rhodesia), the Republic of South Africa, Belgium, Rhodesia (formerly Southern Rhodesia), West Germany and Angola.

The government's first job is to maintain some sort of political stability, a condition on which all other progress rests. During the first half of 1964, for example, the government was able to impose a degree of stability on prices, increase agricultural exports

slightly and maintain a relative balance between expenditures and receipts for the first time since independence. But the rebellion which erupted before the end of the year left the nation again with a sizable deficit.

If the new republic can hold rebellion in check, it has an array of assets to build on.

For one thing, it is a big country, roughly equivalent to all of the United States east of the Mississippi and as yet largely undeveloped. It has abundant rainfall and a climate and terrain varying from tropical lowlands to more temperate highlands. All together, these factors indicate a large potential for expanding the production of a wide range of crops.

Though it may be a long road to the Inga project, the promise is there for the nation. (24)

PRODUCTION SKIDS FOR MAJOR CROPS IN THE CONGO (LEOPOLDVILLE) WHILE NATION COPIES WITH UNREST

Crops	1959-61 average	1964/65*
	1,000 metric tons	
For export:		
Palm oil	321	283
Palm kernels	147	120
Peanuts, unshelled	147	90
Coffee	64	60
Rubber, crude	37	37
Cottonseed	74	16
Tea	4	9
Cotton lint	34	8
Urena and punga (fibers)	8	7
Cocoa	6	6
Sesame seed	5	2
Cinchona (quinine bark)	1	1
Pyrethrum flowers	1	1
For domestic consumption:		
Cassava (manioc)	6,418	6,221
Plantains and bananas	1,451	1,343
Sweetpotatoes	297	291
Corn	290	200
Rice, paddy	117	45
Beans and peas	55	41
Sugar, raw	28	30
Sorghum and millet	50	25
Potatoes	11	9
Tobacco	1	1
Wheat	2	—

* Forecast for crop year.

Other Congo Fells Timber, Pushes Farm Programs in Climate of Peace

To the west of the famous river is the *other* Congo. Its capital is Brazzaville.

Republic of Congo, long part of French Equatorial Africa but independent since 1960, is a country of 133,000 square miles, just under a million people and, as of now, one major exportable resource—timber. Out of the tropical rain forests come the mahogany and other hardwoods that in most years earn the bulk of the nation's foreign exchange. However, farm exports valued at \$4.1 million accounted for 12 per cent of total exports in 1962 (last available figures).

In an effort to expand the economic base, the Brazzaville government has launched a five-year economic development program (1964-68). The \$200 million program is being financed with help from France, the Common Market, the World Bank and other international sources.

In agriculture, Congolese officials hope to double marketable crops by 1968. Up to now most farmers have grown only crops they can use themselves. Major agricultural exports have been coffee, palm kernels, palm oil and peanuts. Plans also call for increased cattle breeding with goals nearly doubling by 1968 the 24,000 head the Congo had in 1964. In view of the inherent obstacles to crop and livestock production in tropical Africa, however, these goals may prove too ambitious.

Last year Brazzaville signed "privileged status" agreements with three private firms, one the country's only sugar processor, the second a new soft drink company, the third a maker of small plastic articles.

Perhaps most important to the Congo's economic future is the sugar agreement, in part an attempt to up production from the

present 20,000 metric tons a year to 35,000 tons. If this succeeds, and a pilot project to grow pineapples works, too, an American fruit canner is prepared to build a canning plant in cooperation with the sugar firm. The government's objective here is mostly to provide jobs in the Niari Valley, an area of critical unemployment.

Meantime, the Congo (Brazzaville) enjoys peace, despite the fact that there are 15 ethnic groups divided into 70 tribes. Some 75 per cent of all children are in school; this is one of the highest attendance rates in Africa. (25)

Canada, Three Latin Republics Show Most Promise as Hemisphere Markets

Canada will remain the dominant market for U.S. farm exports in the Western Hemisphere. As for Latin America, prospects for expanding markets are brightest in Mexico, Peru and Venezuela.

This is the outlook for the next few years, according to a new study on U.S. farm trade with our sister republics.

The report points out that the hemisphere takes a larger share of total U.S. farm exports today than it did in the prewar years. In 1963 we shipped nearly \$1 billion, or 19 per cent of total farm exports, to hemisphere countries. Back in 1935-39 our average sales were only \$119 million, or 16 per cent of worldwide exports.

However, the study shows that the accelerated pace of recent years has been maintained only through stepped-up sales to Canada. Shipments to Latin America have fallen off. One reason, of course, is the loss of our Cuban market, which in pre-Castro years ran around \$145 million a year.

Although the situation is somewhat better now than five years ago, U.S. trade with Latin America has been curtailed by trade barriers imposed in countries trying to stem the outflow of foreign exchange. (26)

Iraq Sinks \$16 Million Into New Wells In Bid to Hold Nomad Tribes on Land

Mesopotamia's ancient riches lay in the agriculture of the fertile valley between the Tigris and Euphrates Rivers. Modern Iraq, occupying virtually the same land, finds its greatest riches in the desert—oil.

Petroleum brings in over 90 per cent of export earnings and about half of all national revenues. Consequently, Iraq has few of the financial problems encountered by Syria and other Middle East neighbors.

However, this quirk of nature contrasts sharply with a farm population struggling to support itself in an arid semiprimitive environment.

Couple these harsh physical realities with political instability—overthrow of the monarchy in 1958, overthrow of the first revolutionary government in 1963—and it becomes clear why many of the plans and programs designed to aid agriculture in the last decade are still on the drawing boards. The wonder is that Iraq's farm economy has progressed at all, which it has.

Part of Iraq's agricultural problem is the small farm size, 12.5 acres on the average. Yet 1.6 million of Iraq's 2.4 million labor force try to wrest food enough for the family from these postage stamp holdings, which in 1958 comprised 57 per cent of all farms.

Farming is chiefly a subsistence type; government sources reported only some 40,000 people earned money wages from agriculture in 1960.

For many generations, vast tracts of land belonged officially to the state, first under the Ottoman Empire, then under the monarchy established after World War I (which in 1932 transferred legal title to a few shiekhs).

From 1958 on, the revolutionary governments outlawed feudal-

ism and began to expropriate the big land holdings.

Goal of the reform movement is to create individual farms no smaller than 18 acres, no larger than 36 acres on irrigated land, double these sizes on nonirrigated land.

By early 1962 some 1.3 million acres of expropriated and state-owned land had been redistributed to individual farmers. Since then, the Ministry of Agrarian Reform has slowed the pace. One reason is to better prepare farmers for ownership. Another is to determine ownership boundaries and irrigation rights before turning over title deeds.

Meantime, Baghdad is concentrating on Iraq's chronic water shortage. The present five-year economic plan (1961-66) allots 80 per cent of agriculture's total share, some \$253 million, for water projects.

Most of these funds will go toward irrigation and drainage systems to bring river water to parched but potentially arable farmland. About \$16.2 million is tagged for drilling artesian wells, partly to induce nomadic tribes to settle down beside them. The rest is for a series of dams to control spring floodwaters that periodically cause disaster.

The government is also urging farmers to fertilize crops, a practice still uncommon in a land where animal fertilizer is needed for fuel. Officials are seeking to improve farm credit and extension services. The major function of state experimental farms is to develop higher yielding varieties of seeds.

Already the world's leading exporter of dates, Iraq has the potential to up output of other export crops. On the domestic side, Iraq in most good crop years is self-sufficient in basic foodstuffs. But "self-sufficient," in the case of Iraq, means the people are getting enough food to sustain them, not enough to provide a balanced diet. (27)

Brazilian Team on U.S. Tour Finds Foreign Aid Bonanza in Tiny Pellet

Foreign aid can be big.

It's a telecommunications network linking the capitals of Pakistan, Iran and Turkey.

It's a sewing machine factory in South Korea, offering jobs to many.

It's a railroad across Cameroon, providing access to foreign markets for the farm products of this central African nation.

But foreign aid can be modest, too, and in its impact just as vital to economic development.

Take the case of five Brazilian visitors to this country and the fumigant pellets they discovered. The story came to light when an ERS marketing specialist reminisced about his month-long tour as technical advisor to the group, here as guests under the foreign aid program.

The five-man team was composed of government officials from northeast Brazil, a vast area of poverty far removed from the neon lights and broad avenues of Rio and Sao Paulo. U.S. food dealers would boggle at the re-

gion's marketing problems.

—Transportation so slow in the hot, humid climate that up to 70 per cent of the fresh fruits and vegetables begin to spoil even before they get to market.

—No refrigeration to speak of and few sanitary measures to protect meat and produce from insects and premature spoilage.

—No grades or standards for grain, poultry or other foods; thus, no market news system.

The team's U.S. itinerary was planned to give them a close look at how we package, process and preserve fresh fruits and vegetables; our sanitary precautions; our system of determining grades and standards.

It would take many years, the group noted, to apply to northeast Brazil some of the techniques they saw. For instance, machine washing and repackaging of spinach and other greens, which they saw in a chain store prepack warehouse, are hardly applicable to present conditions at home. And the U.S.-type supermarket, with its thousands of prepackaged items, seems light years away.

But a fumigant in pellet form typifies the simple things the

group saw that can be applied right away in their own war on poverty.

Grain is the diet mainstay for the Brazilian poor. But grain in the tropical northeast is destroyed by insects which breed by the trillions in storage bins. For many years stored grain has been fumigated frequently, with little impact on the insects but at considerable damage to human lives. The fumigant used created a toxic buildup in those who breathed it, causing in time sudden, seemingly inexplicable death.

The new pellets are completely harmless, a U.S. fumigant firm assured the Brazilian group. The firm had reason to be sure. Its own president was killed by toxic buildup from gas fumigants.

As for insects, the pellets should do the job. The pellets decompose on contact with grain moisture, which means they can permeate the grain more thoroughly, for longer periods of time, than sprays or gases.

"These pellet fumigants brought to us new lights," said the Brazilian team's report on their tour, "and we will try to use them in large scale." (28)

Foreign Spotlight

PHILIPPINES. Manila plans to up fertilizer output 500 per cent in the next three years. Counting domestic production and imports, the country currently has about 6 per cent of the chemical fertilizer that could be effectively used.

VENEZUELA. Caracas reports 1,000 new industrial firms were established last year under the program to reduce the nation's dependence on petroleum. Agriculture is also important to the diversification drive. Crop and livestock production is slated for an 8 per cent yearly increase. Some 380 miles of penetration roads in farm areas were completed last year; another 311 miles are planned.

PANAMA. "It is more advantageous to have a market of 15 million consumers than 1.2 million." So said President Robles in announcing plans to seek entry for Panama into the Central American Common Market. Present members are Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua.

COMMUNIST CHINA. Wheat purchases in world markets may top last year's record of 6.5 million tons. As of late April, contracts for delivery were running well ahead of any previous year, with Peking already committed for 4.5 million tons. Heavy foreign purchases may reflect in part last winter's rain-out of wheat plantings in north China. In a crash program to catch up, farmers in some areas planted seeds without ploughing. (29)

ERS Explains Methodology of Per Capita Food Consumption Estimates

Ever wonder how the Department of Agriculture arrives at how much of this and that we eat during a year?

It seems easy enough. For each major food product or commodity group just add up stocks on hand January 1, imports, and annual production to get total annual supply. Then subtract stocks on hand at the end of the calendar year to arrive at total annual utilization. Then deduct exports and shipments to U.S. territories; nonfood uses such as feed, seed, alcoholic beverages and industrial uses; and military food use. This leaves domestic civilian food consumption. Divide by resident civilian population on July 1 and you have per capita consumption.

But it's more complicated than that. For one thing, the commodity balance sheets are calculated using weights of food measured at the primary distribution stage of the marketing system. By "primary" the statisticians mean after a farm product is identifiable as food but before it is mixed with other primary foods. These weights are not uniform among commodities. Some are measured on a farm weight basis; others after partial or complete processing. They incorporate various amounts of nonfood by-products and they often lose weight in processing and marketing on their way to retail sale.

In order to bring consumption estimates as close as possible to the form in which items are usually sold at retail, the statisticians have to introduce a conversion factor.

For many commodities, they have to convert primary weights to retail weight equivalents by estimating waste and loss from further processing, trimming, shrinkage or spoilage.

Even with all these things considered, the per capita food con-

sumption estimates don't fit many individuals because:

(1) They are national averages for the entire civilian population, with no breakdown by sex, color, creed or national origin. And these factors—plus differences in region, age, family size, level of income and urbanization—very definitely affect patterns or level of food consumption for an individual.

(2) Retail weight equivalents measure consumption as if all food were sold through retail food stores. Much of it, however, is consumed on the farms where it is produced; in restaurants, hotels and other away-from-home eating places; and in schools, camps, hospitals, orphanages and other institutions.

(3) No measure is made of how much food by weight is lost after it leaves the retail store. Spoilage, inedible waste, cooking losses, unused leftovers and use as pet food are included in poundages per person.

For all of these reasons, few individuals will find that the per capita consumption estimates match their diets. But these estimates and the per capita consumption indexes based on them do mirror the average changes in our *national* diet, helping farmers and marketing men keep up with consumer demand. (30)

Fat Figures

Last year most adults in the U.S. ate from one-fourth to one-half their weight in food fats and oils—more than 47 pounds per person. That's up a pound from 1963 and the highest per capita total in 24 years.

Biggest increase occurred in consumption of cooking and salad oils which jumped nearly two pounds per person over 1963—from 12.2 to 14.1 pounds. Margarine and shortening use per capita also edged up slightly; lard consumption remained steady at 6.4 pounds. Only butter declined—down 0.2 pound per person to 6.7 pounds. (32)

Problem of Expanding Lunch Service To Older Schools Explored in Study

Seven out of 10 American children have access to the nutritious lunches offered through the National School Lunch Program. But many of the children not yet covered by the program are from congested, low-income neighborhoods where the nutritional benefits of the program are needed most.

They are the children attending older urban schools, public and private, where installation of kitchen and dining facilities is not feasible.

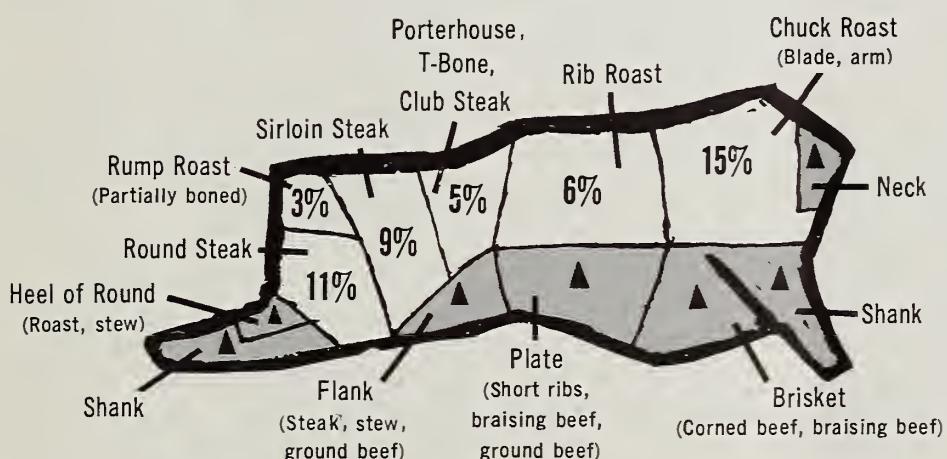
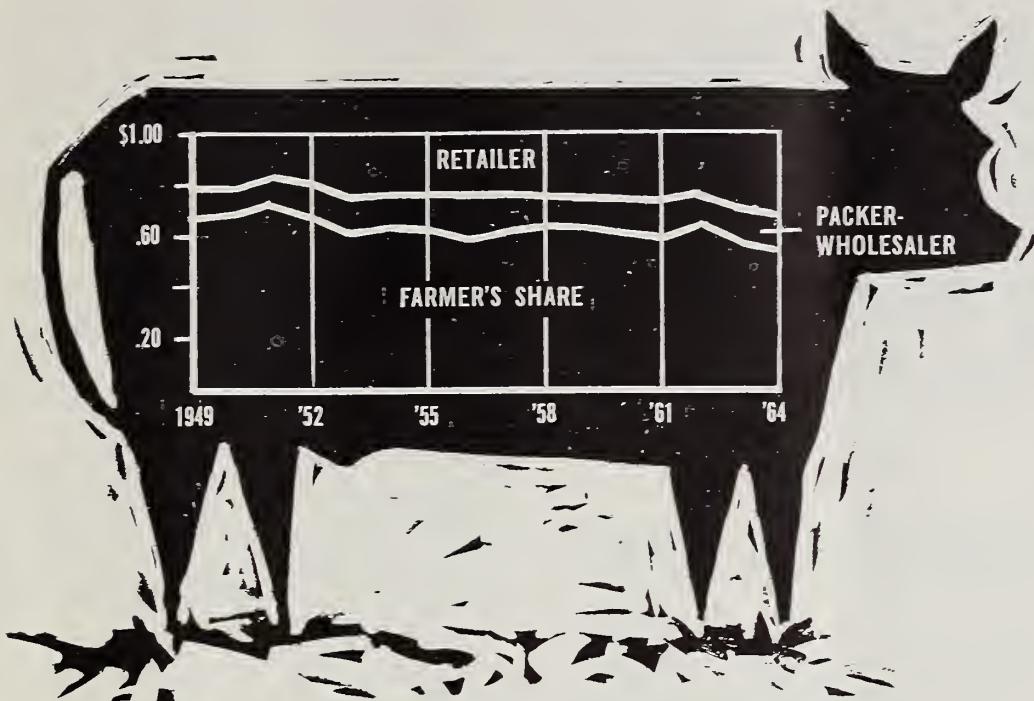
Some school systems have solved the problem of their kitchenless older schools by using central kitchens. These may be non-school kitchens used solely for the preparation of lunches for delivery to receiving schools. Or they may be kitchens in newer schools which have been adapted or expanded to prepare extra lunches for carryout service.

Food service operations in eight school systems using central kitchens have been studied by the Department of Agriculture in response to a request from the Senate Committee on Agriculture. An ERS report on their experience is designed to help other school systems decide whether central kitchens would enable them to expand the lunch program to older schools in poorer city areas.

The report illustrates the necessary steps in setting up a central kitchen and distribution operation through hypothetical examples. The cost tables used for these examples can be modified by school administrators to fit their own local conditions.

Local school officials and others interested can obtain single copies of "Establishing Central School Lunch Kitchens in Urban Areas: Problems and Costs," AER-72, from the Division of Information, Office of Management Services, USDA, Washington, D. C. 20250. (31)

STEER TO STEAK



Carcass cuts	Percentage of carcass	Retail price per pound ¹		Retail value ²
		Per cent	Dollars	
Retail cuts				
Steak:				
Porterhouse, T-bone, club	5.2	1.16	6.03	
Sirloin	8.4	.98	8.23	
Round	11.3	1.06	11.98	
Roast:				
Rib	6.3	.82	5.17	
Rump	3.4	1.02	3.47	
Chuck (blade or arm)	14.9	.61 ³	9.09	
Hamburger, stew, other cuts	24.5	.59 ³	14.46	
Total or average	74	.79³	58.43	
Bones, fat, waste and shrinkage	26	.027 ³	.70	
Grand total or average	100	.59³	59.13²	

¹ May 1964. ² Based on 100 pounds of U.S. Choice grade carcass beef. ³ Weighted average since, for example, hamburger and stew meat sell at different prices.

WHO GETS THE CONSUMER'S BEEF DOLLAR? As the chart shows, the farmer still gets more than half, but the retailer's share has grown since 1951. Consumer preferences have shifted toward more closely trimmed meats and boneless cuts. Also, most fresh beef nowadays is sold prepackaged. These services are being performed at the retail level. (Note: The shares of the consumer dollar in the chart are based only on the Choice grade beef sold at retail. That part of the live price which arises from byproducts—hide, tallow, heart—has been estimated and removed.)

WHAT DOES THE RETAILER GET FOR HIS BEEF DOLLAR? He gets a carcass that weights about 60 per cent as much as the live steer. And when he gets through cutting up the carcass for his customers, only three-quarters of it will be in saleable retail cuts; the remainder will be waste (fat, bones, shrinkage). Back in 1951, before they took on more of the trimming and deboning chores, retailers got a carcass yield of 80 per cent.

WHAT PRICE STEAK OR STEW? When a retailer buys a beef carcass, he pays the same price for each pound. But a carcass yields much more of some cuts than others and some of the cuts are in much greater demand than others. The retailer sells the cuts for varying prices: some for more than twice the carcass price per pound, some for less than half. The more desirable and higher priced cuts represent a small proportion, while the medium priced roasts, hamburger and stew meat make up the largest part of the carcass. The prices the retailer gets must average out to cover the original cost of the carcass plus the cost of marketing. (33)

THE 1965 EASTERN EUROPE AGRICULTURAL SITUATION. East European Branch, Foreign Regional Analysis Division. ERS-For. 115.

The outstanding feature of the farm situation in 1964 was the good recovery by the Soviet Union from its disastrously low output of 1963. Record crops of sugar beets, sunflowerseed, potatoes and vegetables were officially reported. (See March 1965 Farm Index.)

THE 1965 FAR EAST, COMMUNIST CHINA, OCEANIA AGRICULTURAL SITUATION. Far East Branch, Foreign Regional Analysis Division. ERS-For. 116.

Food grain output in the free Far East in 1964 stood only 1 per cent above 1963. Food shortages have appeared and in some quarters have become serious. (See March 1965 Farm Index.)

THE 1965 AFRICA AND WEST ASIA AGRICULTURAL SITUATION. Foreign Regional Analysis Division. ERS-For. 117.

Agricultural output in North Africa last year showed a modest 2 point gain over the 1963 production index. South of the Sahara, nearly all countries are expected to increase farm production over 1963/64 for a regional increase of 3 per cent. However, in West Asia, regional farm output in 1964 dropped about 1½ per cent below the relatively high level of 1963. (See March 1963 Farm Index.)

FOOD BALANCES FOR 30 COUNTRIES IN AFRICA AND WEST ASIA, 1959-61. Foreign Regional Analysis Division. ERS-For. 119.

These food balances were prepared using average figures for the years 1959 through 1961 to minimize annual abnormalities. They represent a national average and thus do not attempt to expose diet variations within the countries.



recent publications

The publications listed here are issued by the Economic Research Service and cooperatively by the state universities and colleges. Unless otherwise noted, reports listed here and under Sources are published by ERS. Single copies are available free from The Farm Index, OMS, U.S. Department of Agriculture, Washington, D.C. 20250. State publications (descriptions below include name of experiment station or university after title) may be obtained only by writing to the issuing agencies of the respective states.

ELASTICITY OF FOOD CONSUMPTION ASSOCIATED WITH CHANGES IN INCOME IN DEVELOPING COUNTRIES. R. D. Stevens, Development and Trade Analysis Division. FAER-13.

Governments planning economic development should be aware that rapid increases in food flows through marketing channels may cause inflationary pressures on food prices unless marketing channels are made capable of handling these increased flows. (See February 1965 Farm Index.)

NATURE OF COMPETITION IN FLUID MILK MARKETS—MARKET ORGANIZATION AND CONCENTRATION. A. C. Manchester, Marketing Economics Division. AER-67.

The typical fluid milk market in the U.S. is supplied by a relatively small number of handlers with a major portion of the sales made by a handful of firms. (See April 1965 Farm Index.)

MAJOR MARKETING CHANNELS FOR SHELL EGGS IN 18 METROPOLITAN AREAS. J. R. Pedersen and F. L. Faber, Marketing Economics Division. ERS-219.

This is a summary report of the major movement of shell eggs in 18 large U.S. cities. The report contains previously unpublished data for eight of the cities and benchmark data on the number and sizes of firms handling shell eggs and the marketing channels through which eggs flow.

PRICE SPREADS FOR BEEF. J. B. Bullock and D. C. Hacklander, Marketing Economics Division. Misc. Pub. 992.

The difference between what the farmer receives for U.S. Choice grade cattle and what the consumer pays for U.S. Choice beef at retail increased 12.6 cents per pound between 1949 and 1964, an increase of 55 per cent in 16 years. Most of the increase has been in the wholesale-retail spread. (See page 21, this issue.)

AN ANALYSIS OF GRAIN TRANSPORTATION IN THE NORTHWEST. J. R. Corley, Marketing Economics Division. ERS-200.

Rail transportation in the Northwest continues to be very important to grain marketing, although its relative position has declined. Increased competition brought on by increasing numbers of trucks and the expanding volume of grain being moved by barges on the Columbia River have caused changes to occur in the flow patterns of grain from country origins to the Northwest port areas.

HARVESTING OF CORN, SMALL GRAINS, AND RELATED CROPS: DATA ON PRACTICES. J. J. Csorba, Farm Production Economics Division, and J. W. Kirkbride, Statistical Reporting Service. *Statis. Bul.* 354.

Combining of small grains in the U.S. increased from about 84 per cent of the total production in 1950 to 97 per cent in 1960. During that period, combining from windrow increased from 22 to 27 per cent of the total, and harvesting by combine from standing stalk rose from about 62 per cent of all small grains harvested in 1950 to 70 per cent in 1960.

GRAIN BANKING IN THE MIDWEST—IMPACT ON THE FEED INDUSTRY AND THE FARMER. W. H. Stahl and W. S. Farris, Purdue University Agricultural Experiment Station in cooperation with the Marketing Economics Division. *Purdue Univ. Agr. Expt. Sta. Res. Bul.* 781.

Labor and other operating costs per ton of feed processed may be reduced by grain bank use. This is largely achieved by processing a larger or the same volume through existing mill facilities with the same or smaller labor force.

FARM-RETAIL SPREADS FOR FOOD PRODUCTS, 1947-64. Economic Research Service. ERS-226.

This report presents revised farm-food market basket statistics. Differences from the earlier series arise mainly from changes in the products in the market basket, in weights assigned to individual products, in retail prices and in methods and data used in calculating farm values.

FARM MECHANIZATION AND LABOR STABILIZATION, PART II IN A SERIES ON TECHNOLOGICAL CHANGE AND FARM LABOR USE, KERN COUNTY, CALIFORNIA, 1961. W. H. Metzler, Farm Production Economics Division in cooperation with the California Agricultural Experiment Station. Giannini Foundation Res. Rpt. 280.

Mechanization of the cotton harvest has erased the high peak of seasonal farm labor use in Kern County. Some management of labor recruitment in the county could lead to the development of a dependable local labor force and the elimination of migratory labor.

THE ECONOMIC IMPLICATIONS ASSOCIATED WITH PROPOSED LAND

USE CHANGES IN THE WISCONSIN "TWIN PARKS" WATERSHED. R. A. Christiansen, Farm Production Economics Division, and S. D. Staniforth, University of Wisconsin College of Agriculture. *Univ. of Wis. College of Agr. Econ.* 39.

The proposed watershed project could reduce flood damage in the area from an estimated \$44,142 a year to \$12,318. In addition, expected benefits accruing to farmers as a result of land use changes in the flood plain could boost anticipated benefits by another \$10,842.

ECONOMIC EVALUATION OF CHANGES IN THE USE OF FLOOD PLAIN LANDS (BASED ON A STUDY OF THE WISCONSIN MILL CREEK WATERSHED). R. A. Christiansen, Farm Production Economics Division, and S. D. Staniforth, University of Wisconsin Department of Agricultural Economics. *Univ. of Wis. Agr. Econ.* 41.

This study was made to help determine the extent of land-use conversion actually occurring on the flood plain as well as to measure the effect the converted acres have had upon crop and livestock programs and farm income in the area.

Numbers in parentheses at end of stories refer to sources listed below:

1. H. Abel and W. Capener, Shifts in the Production and Marketing of Western Stocker-Feeder Cattle, Wash. State Univ. Agr. Expt. Sta. Bul. (M*); 2. P. H. Stephens, "Recent Developments in Beef Cattle Financing," *Economic Problems in Great Plains Ranching*, Mont. Agr. Expt. Sta. Misc. Pub. 6 (P*); 3. D. Hoover and R. O. Aines, *The 1962 Feed Grain Program in the Central Coastal Plain of North Carolina*, N. C. State Univ. Agr. Expt. Sta. (M*); 4. P. E. Nelson, Jr., *Market News Dissemination in the Southwest*, AER-71 (P); 5. R. H. Miller, "Nonfat Dry Milk Increasing," *Dairy Situa.*, DS-304 (P); 6. R. W. Hecht (SM); 7. P. E. Tix and W. B. Sundquist (SM); 8. G. K. Bowles and W. E. Sellers, Jr., *The Hired Farm Working Force of 1963*, AER (M); 9 & 10. G. W. Kromer, *Economic Outlook for Cottonseed and Soybeans* (S); 11. E. D. Solberg, *Greenbelt Zoning—An Evaluation* (S); 12. A. B. Winter (SM); 13. R. A. Loomis (SM); 14 & 15. J. V. Powell and V. G. Edman, *Marketing Flowers: Credit and Financing Problems of Retail and Wholesale Florists in Four Iowa Cities*, MRR-704 (P); 16. J. R. Corley (SM); 17. H. M. Moede and B. Burnside, *Market Potential for Low-Fat Milk*, MRR-709 (P); 18. D. H. Carley and J. C. Purcell, *Patterns of Fluid Milk Distribution in the Southeast, 1959 and Projected 1975*, Southern Cooperative Series (M*); 19. *Marketing and Transportation Situation*, MTS-157

- (P); 20. C. R. Burbee, E. T. Baldwin and W. F. Henry, *Marketing New England Poultry—Effects of Firm Size and Production Density of Spatial Costs for an Integrated Broiler Marketing Firm*, Univ. of N. H. Agr. Expt. Sta. Bul. 485 (P*); 21. J. C. Purcell, D. D. Rohdy and W. L. Fishel, *Analysis of Prices of Hogs in the Southeast, Southern Cooperative Series* (M*); 22. & 23. *Dairy Situation*, DS-305 (P); 24. S. W. Skinner, *The Congo's Agricultural Economy in Brief*, ERS-For. 121 (P); 25. R. E. Kampe (SM); 26. J. J. Naive and G. A. Bennett, *U.S. Agricultural Trade with the Western Hemisphere*, ERS-For. 122 (P); 27. H. C. Treakle, *The Agr. Economy of Iraq*, ERS-For. 125 (M); 28. J. W. H. Brown (SM); 29. *Foreign Regional Analysis Division* (SM); 30. S. J. Hiemstra, *U.S. Food Consumption*, AH (M); 31. R. B. Reese, *Establishing Central School Lunch Kitchens in Urban Areas: Problems and Costs*, AER-72 (P); 32. *Fats and Oils Situation*, FOS-227 (P); 33. J. B. Bullock and D. C. Hacklander, *Price Spreads for Beef*, Misc. Pub. 992 (P). 34. S. W. Skinner, *The Congo's Agricultural Economy in Brief*, ERS-For. 121 (P).

*Speech (S); published report (P); unpublished manuscript (M); special material (SM); * State publications may be obtained only by writing to the experiment station or university cited.*

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From Barber Shop to Bakery

Smooth shave this morning? Credit may go to palm kernel oil from the Congo (Leopoldville). One of the many uses of this versatile oil is as an ingredient in shaving soap. It produces a stiff, fine-grained lather that makes it a little easier to get the whiskers off.

Palm kernel oil, which is something like coconut oil, is also much in demand for baked goods, helping to keep them fresh and attractive for a long shelf life.

Palm products—palm oil, palm kernels, palm kernel oil and palm kernel cake, all with different characteristics and uses—are the Congo's most valuable agricultural exports. The best grades of palm oil and palm kernel oil go into margarine, cooking fats, chocolate bars and other food products. The intermediate grades of palm oil end up as soap and candles. Industrial grades are used in steelmaking and mining.

The United States buys about half the exports of palm kernel oil from the Congo, which currently total about 32,000 metric tons a year.

The Congo's oil palm industry is one of the best managed in Africa. The area is the only major production region crushing a large part of its own palm kernels, though other tropical countries export whole palm kernels for use both as oil and meat.

Aside from the commercial production, large quantities of palm oil are produced by individual farmers in the Congo. The oil is food and lighting for the Congolese. (34)

THE FARM INDEX

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